

the data driver being divided into a plurality of blocks arranged side by side along a single edge of the liquid crystal display panel.

REMARKS

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached Appendix is captioned "Version with markings to show changes made."

As a preliminary matter, with regard to the drawings, Applicants have included herewith a marked-up copy of Figure 4, with the proposed changes in red. Approval of the proposed drawing changes is respectfully requested.

Claims 1-17 stand rejected under 35 U.S.C. § 102 (e) as being anticipated by United States Patent No. 5,856,816 to Youn. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the Youn reference fails to disclose all of the features of the present invention. Specifically, Youn fails to disclose a liquid crystal display device with a data driver that is divided into a plurality of blocks, and further wherein "each of said blocks includes a plurality of signal lines that are arranged adjacent to each other along a single edge of the liquid crystal display panel," as defined in independent Claim 1. Additionally, Youn also fails to disclose the display device of independent Claim 14 that includes groups of signal lines with "said signal lines within each of said groups being adjacent to each other along a single edge of the liquid crystal display panel." Similarly,

independent Claim 15 also includes “signal lines in each of said plurality of blocks being adjacent to each other along a single edge of the liquid crystal display panel,” a feature not disclosed in Youn. Finally, the Youn reference also fails to disclose a liquid crystal display device with “the data driver being divided into a plurality of blocks arranged side by side along a single edge of the liquid crystal display panel,” as defined in Claim 16.

Claims 1, 14 and 15 each recite that the signal lines within a single block (or within a single group associated with a single block) are “adjacent to each other along a single edge of the liquid crystal display panel.” One example of an embodiment of the present invention that includes this feature is shown in Applicants’ Figure 4, which shows four groups of signal lines 64A, 64B, 64C and 64D, where each signal line group corresponds to one of the four data driver blocks 46A, 46B, 46C and 46D. As can be seen in Figure 4, within each group (64A, 64B, 64C or 64D), the display signal lines are “adjacent to each other along a single edge of the liquid crystal display panel.” In other words, the signal lines within a single group are relatively near to each other, without having any signal lines from another group intervening. *See attached copy of Webster’s Third New International Dictionary, page 26, 1993 (definitions of “adjacent:” “relatively near and having nothing of the same kind intervening,” “immediately preceding or following with nothing of the same kind intervening,” and “[As applied] to things of the same type, [the word adjacent] indicates either side by side proximity or lack of anything of the same nature intervening.”).*

In contrast, the device of Figure 2 of Youn shows data lines D1, D2, D3, . . . D2n that are positioned in an alternating arrangement, with the odd data lines (D1, D3, etc.) originating from data driver 2a and the even data lines (D2, D4, etc.) originating from data driver 2b. However, even assuming *arguendo* that data driver 2a could be considered as one block and data driver 2b could be considered as another block, this device still does not satisfy independent Claims 1, 14 and 15 because the signal lines within a single “block” are not adjacent to each other along a single edge of the liquid crystal display panel. Instead of being adjacent to each other, the signal lines of driver 2a are separated from each other by the signal lines of driver 2b. In other words, since there are signal lines of another “block” intervening between each of the signal lines of a single “block,” the device of Youn cannot be considered as having signal lines with a single group (or associated with a single block) as “being adjacent to each other,” as defined in Claims 1, 14 and 15. Additionally, the signal lines of Figure 2 of Youn are arranged on opposite edges of the panel, and thus are not “along a single edge of the liquid crystal display panel.” Accordingly, as all of the features of independent Claims 1, 14 and 15 are not disclosed in Youn, Applicants respectfully request the withdrawal of this § 102(e) rejection of these claims.

Claims 2-13 all depend, directly or indirectly, from independent Claim 1, and therefore include all of the features of Claim 1, plus additional features. Accordingly, Applicants respectfully request that the § 102(e) rejection of dependent Claims 2-13 under Youn be withdrawn considering the above remarks directed to independent Claim 1.

Turning now to independent Claim 16, Applicants respectfully submit that the Youn reference also fails to disclose all of the features of this claim. In particular, Youn fails to disclose a data driver that is divided into a plurality of blocks that are “arranged side by side along a single edge of the liquid crystal display panel,” as defined in Claim 16.

Applicants’ Figure 4 shows one embodiment of the invention defined in Claim 16 in which the data driver is divided into four blocks 64A, 64B, 64C and 64D. As can be seen in Figure 4, all four of these blocks are “arranged side by side along a single edge of the liquid crystal display panel.”

In contrast, even assuming *arguendo* (once again) that data drivers 2a and 2b of Figure 2 of the Youn reference could be considered as being two blocks of a divided data driver, driver 2a is on the opposite edge of the panel from driver 2b. Accordingly, with this opposite side configuration, driver 2a is not “side by side” with driver 2b, as defined in Claim 16. Nor are both drivers located “along a single edge of the liquid crystal display panel,” as also defined in independent Claim 16. Instead of being located along a single edge, the drivers 2a and 2b of Youn are located on two different edges. Accordingly, as all of the features of Claim 16 are not disclosed in the Youn reference, Applicants respectfully request the withdrawal of this § 102(e) rejection of independent Claim 16.

Claim 17 depends from independent Claim 16, and therefore includes all of the features of Claim 16, plus additional features. Accordingly, Applicants respectfully request

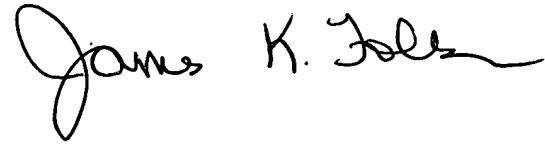
that the § 102(e) rejection of dependent Claim 17 under Youn be withdrawn considering the above remarks directed to independent Claim 16.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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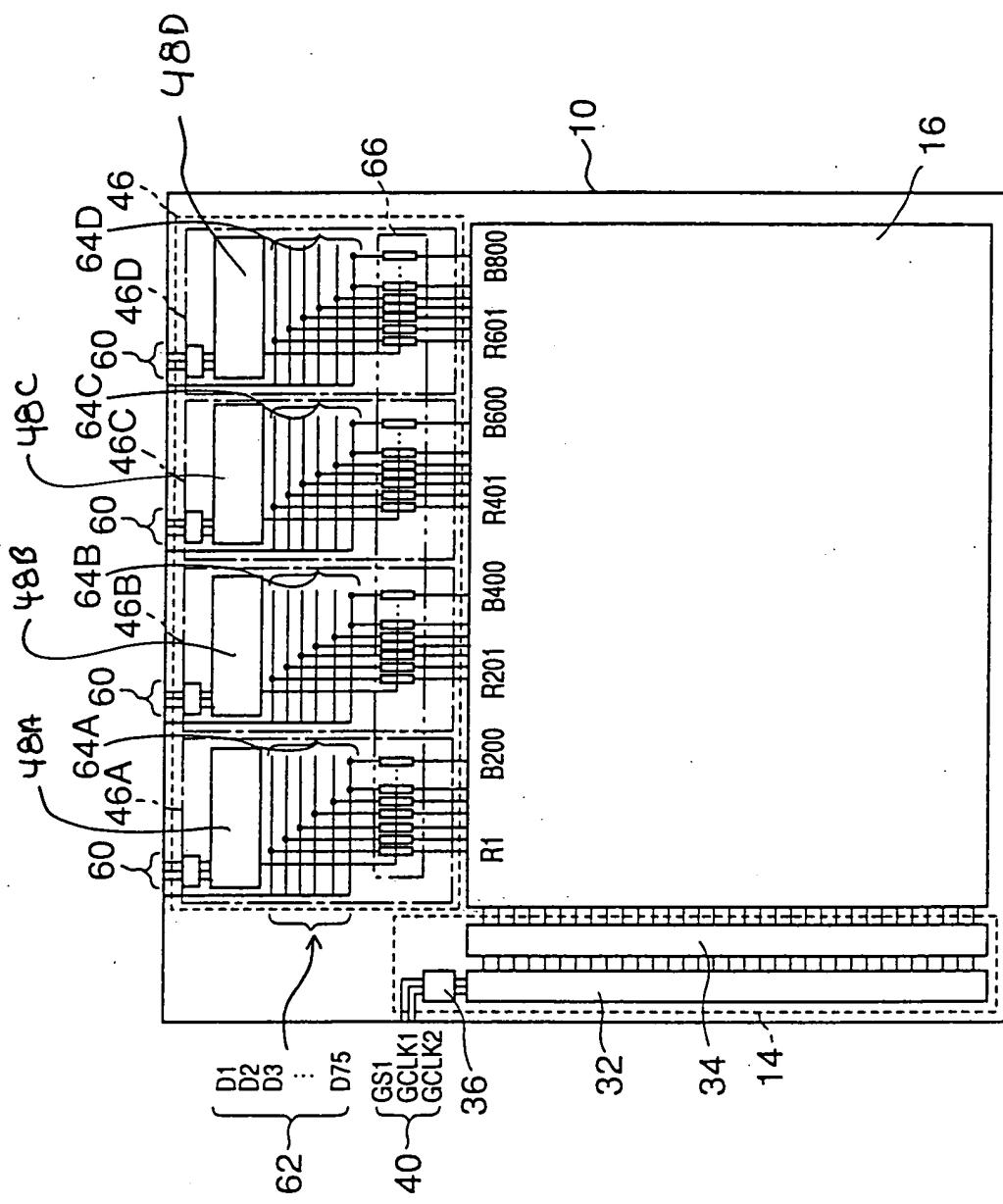
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FIG. 4



VERSION WITH MARKINGS TO SHOW CHANGES MADE**In the Claims:**

Claims 1, 14, 15 and 16 have been amended as follows:

1. (Twice Amended) A liquid crystal display device including a data driver and a gate driver, comprising:

a liquid crystal display panel; and

a substrate on which said liquid crystal display panel, and said data driver, and said gate driver are integrally formed,

the data driver being divided into a plurality of blocks so as to divide the liquid crystal display panel into sections arranged side by side, which simultaneously supply the liquid crystal display panel with display signals respectively supplied thereto[.];

wherein each of said blocks includes a plurality of signal lines that are arranged adjacent to each other along a single edge of the liquid crystal display panel.

14. (Once Amended) A liquid crystal display device including a data driver and a gate driver, comprising:

a liquid crystal display panel; and

groups of signal lines for carrying display signals, said signal lines within each of said groups being adjacent to each other along a single edge of the liquid crystal display panel,

the data driver being divided into a plurality of blocks from which the groups of signal lines extend over corresponding partial areas of the liquid crystal display panel so that each of the groups of signal lines is associated with a respective one of the blocks of the data driver.

15. (Once Amended) A liquid crystal display device including a data driver and a gate driver, comprising:

a liquid crystal display panel, and

signal lines extending from the data driver and carrying display signals,

the data driver and the signal lines being divided into a plurality of blocks so that the divided signal lines extending from one of the plurality of blocks extend over a corresponding divided area of the liquid crystal display panel,

said divided signal lines in each of the plurality of blocks being adjacent to each other along a single edge of the liquid crystal display panel.

16. (Once Amended) A liquid crystal display device including a data driver and a gate driver, comprising:

a liquid crystal display panel; and

a substrate on which said liquid crystal display panel, said data driver, and said gate driver are integrally formed,

the data driver being divided into a plurality of blocks arranged side by side along [an] a single edge of the liquid crystal display panel.

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